Remarks

Claims 17-22 and 38-50 are pending. Claims 17-22, 38, 39, and 43-48 including independent claims 17, 38, and 47 were rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,532,484 Sweetser et al.

Sweetser describes a "defective pixel signal substitution in thermal imaging systems." "Processed signal 32 is fed into reference generator 160 which generates a reference value 162 for comparison to processed signal 32 for purposes of defective pixel detection. In one embodiment, reference generator 160 may be analog or digital circuitry that delays reference value 162 by one cycle from processed signal 32. If integrated circuit substrate 22 addresses signals from pixels 20 pixel-by-pixel and row-by-row, then signals adjacent in time along the processing path of detection and substitution module 28 correspond to pixels 20 adjacent in space on focal plane array 18. Integrated circuit substrate 22 may address the rows of focal plane array 18 in a bidirectional, serpentine manner to ensure each successively addressed pixel 20 is adjacent in space on focal plane array 18." (column 10, lines 8-22)

"Reference generator 160 may also combine signals from two or more spatially related pixels 20. Furthermore, reference value 162 may be the average of all signals received from pixels 20 in one frame or over multiple frames. It should be understood that the present invention contemplates any combination of signals from pixels 20 to generate a reference signal 162 that may be used to identify defective pixels 21." (column 10, lines 23-30)

As described above, reference generator 160 may incorporate analog or digital circuitry that allows comparison of signals from adjacent pixels 20 addressed sequentially in time. Reference generator 160 may also implement a filter (not shown), with or without a memory, that generates reference value 162 based on current or past signals from neighboring pixels 20." (column 10, lines 52-59) Sweetser does not teach or suggest resetting any pixel. Sweetser also does not teach or suggest designating a pixel as either partially or completely corrupted.

Sweetser does not teach or suggest resetting any pixel. Sweetser only describes setting a pixel to a reference value. The reference value is described in Sweetser in many places. "Reference generator 160 may be analog or digital circuitry that delays reference value 162 by

one cycle from processed signal 32." (column 10, line 10) "Reference generator 160 may also combine signals from two or more spatially related pixels 20. Furthermore, reference value 162 may be the average of all signals received from pixels 20 in one frame or over multiple frames." (column 10, line 23) In fact, Sweetser states specifically that the reference signal is any combination of signal from pixels 20. "The present invention contemplates any combination of signals from pixels 20 to generate a reference signal 162" (column 10, line 29). Any combination of signals from pixels 20 or anything else described in Sweetser does not teach or suggest "resetting a pixel" or "setting a pixel voltage to a reset voltage, wherein the reset voltage corresponds to the state of the pixel when the pixel has been exposed to substantially no radiation" as recited in independent claims.

Sweetser also does not teach or suggest designating a pixel as either partially corrupted or completely corrupted. According to various embodiments, the techniques of the present invention recognize that a pixel can be operable, slightly corrupted, or completely corrupted. Different correction mechanisms may be beneficially applied to each case. Sweetser only describes an operable pixel or a corrupted pixel. A pixel in Sweetser is either defective or not defective. "It should be understood that the present invention contemplates any combination of signals from pixels 20 to generate a reference signal 162 that may be used to identify defective pixels 21." (column 10, line 30) The Examiner views a pixel that does not exceed a threshold as being partially corrupted. This is believed contrary to the plain meaning of the term partially corrupted and contrary to the meaning of partially corrupted in the specification. A pixel that does not deviate from an expected value in any detectable manner would be considered a partially corrupted pixel under the Examiner's definition. This is contrary to what partially corrupted means and contrary to the specification, which states "partially corrupted pixels may be treated different from completely corrupted pixels. In the simpler embodiment, pixels are never treated as partially corrupted, they are either working correctly or completely corrupted." (page 11, lines 12-14) This indicates that there are three states of working correctly, partially corrupted, and completely corrupted.

CONCLUSION

In light of the above remarks, the rejections to the independent claims are believed overcome for at least the reasons noted above. Applicants believe that all pending claims are allowable in their present form. Please feel free to contact the undersigned at the number provided below if there are any questions, concerns, or remaining issues.

Respectfully submitted,

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